

HF SURGICAL UNITS



alsa[®]
bologna

MADE IN ITALY

EXCELL NHP ENDOMED

EXCELL NHP ENDOMED



Electrosurgical unit for monopolar and bipolar surgery

EXCELL NHP ENDOMED is a complete technologically advanced electrosurgical unit suitable for any type of monopolar and bipolar technique. It is also equipped with a special

bipolar cutting current in liquid, particularly suitable for the new bipolar endoscopic procedures in urology and gynaecology in saline solution.

CURRENTS

MONOPOLAR CURRENTS

PURE	Non-modulated sinusoidal current for pure cut without coagulating effect
BLEND 1	Sinusoidal modulated current for coagulating cut
BLEND 2	Modulated current for cut with strong coagulating effect, Spray type, for surgery and laparoscopy
AUTO PURE	Non-modulated sinusoidal current for cut without coagulating effect
AUTO BLEND	Sinusoidal modulated current for coagulating cut
AUTO ENDO	Current with alternating cut and coagulation phases for flexible endoscopy

FULG FORCED	Modulated high voltage current with strong coagulating superficial and deep effect
PINPOINT	Modulated medium voltage current with medium coagulating superficial and deep effect
SOFT	Modulated low voltage current with delicate coagulating effect without superficial carbonisation
SPRAY	Modulated very high voltage current for very strong superficial coagulation with a low tissue penetration, even without any contact of the active electrode

BIPOLAR CURRENTS

STANDARD	Pulsed current for cut
SALINE	Pulsed current for endoscopic cut in saline solution
MICRO	Pulsed current for coagulation Soft / Micro Precise type and for coagulation in saline solution
MACRO	Pulsed current for coagulation Standard / Forced type in laparoscopy
SEAL	Pulsed current with automatic stop for sealing of big vessels up to 7 mm diameter



TECHNICAL FEATURES

HF generator compliant with	IEC 60601-1 and IEC 60601-2-2
CE Classification	IIb
IEC 60601-1 classification and type	ICF
IEC 60601-2-2 output circuit	Floating - protected for the use of a defibrillator (HF dispersion <150 mA)
Monopolar and bipolar working frequency	440 kHz
Operation check	<p>Complete self-diagnosis by means of a double microprocessor which performs:</p> <ul style="list-style-type: none"> - Main Self-check when turned on - Standard Self-check during operation and, if any, operation lock (within 100 milliseconds), with alarm signalling to operators through specific Error Codes, in the event of problems concerning: <ul style="list-style-type: none"> - general operation or activation errors (General Error Control) - output power (Output Error Control) - HF Leakage Control: continuous verification, by means of a specific circuit, of any HF current dispersion to earth and possible automatic power reduction by means of an alarm signal - Storage of the last 32 Error Codes
Power self-adjustment	<p>By means of a microprocessor with two different systems:</p> <ul style="list-style-type: none"> - ADC System - Constant power: self-adjusts the power, controlling voltage and current, based on real-time feedback (7000 checks/sec) between device and patient's tissue - APC System - Constant voltage: self-adjusts the power, keeping the voltage constant, based on a real-time feedback (7000 checks/sec) between device and patient's tissue
Operation memorisation	100 programs
Outputs	2 Monopolar and 1 Bipolar
Foot-operated control	<p>EXCELL NHP ENDOMED can be equipped with a double pedal control that can be selected for monopolar or bipolar functions.</p> <p>The pedal is compliant with IEC 60601-2-2, waterproof (IP67), electric with 12 VDC low voltage power supply.</p>
Micro/macro power adjustment	<p>Monopolar: 0-30 W = 1 W, 30-100 W = 2 W, 100-200 W = 5 W, over 200 W = 10 W</p> <p>Bipolar: 0-10 W = 0.5 W, 10-30 W = 1 W, 30-100 W = 2 W, over 100 W = 5 W</p>
Panel	Smooth, with digital displays and keys
Neutral electrode safety circuit NPCC System	Control of the connection of the neutral electrode - and of the quality of the contact using double section/split electrodes - with alarm signal and possible lock of delivered power.
Power supply	230 or 115 V - 50/60 Hz
Power consumption at 230 V	Max power 3.6 A = 828 VA, Stand-by 0.4 A = 92 VA
Cooling	Convection, without fan
Equipotential bonding	Standard DIN 42801 plug
Size (LxDxH) and weight	38x35x16 cm – 15 Kg

OUTPUT POWERS

Monopolar currents	EXCELL NHP ENDOMED
PURE	350 W - 350 Ω 3450 Vpp - CF: 1.6 M: no - D: no
BLEND 1	300 W - 350 Ω 3600 Vpp - CF: 2.3 M: 29 kHz - D: 65%
BLEND 2	140 W - 600 Ω 7600 Vpp - CF: 8.1 M: 19 kHz - D: 9%
AUTO PURE	350 W - 350 Ω 1350 Vpp - CF: 1.6 M: no - D: no
AUTO BLEND	300 W - 350 Ω 1930 Vpp - CF: 2.3 M: 29 kHz - D: 65%
AUTO ENDO	220 W - 350 Ω 1710 Vpp - CF: 2.2 50% Pure 50% Blend I
FULG FORCED	150 W - 350 Ω 4700 Vpp - CF: 4.5 M: 78 kHz - D: 3,5%
PINPOINT	250 W - 250 Ω 3460 Vpp - CF: 2.6 M: 29 kHz - D: 50%
SOFT	280 W - 250 Ω 3440 Vpp - CF: 2.5 M: 29 kHz - D: 56%
SPRAY	140 W - 600 Ω 7600 Vpp - CF: 8.1 M: 19 kHz - D: 9%

Current self-adjustment

ADC	APC
X	
X	
X	
	X
	X
	X
X	
X	
X	
X	

Bipolar currents	EXCELL NHP ENDOMED
STANDARD	180 W - 350 Ω 1200 Vpp - CF: 1.5 M: no - D: no
SALINE	320 W - 50 Ω 1200 Vpp - CF: 1.5 M: no - D: no
MICRO	130 W - 100 Ω 420 Vpp - CF: 1.7 M: no - D: no
MACRO	130 W - 200 Ω 1050 Vpp - CF: 1.7 M: no - D: no
SEAL	130 W (200 W) - 100 Ω 420 Vpp - CF: 1.7 M: no - D: no

Current self-adjustment

ADC	APC
X	
X	
	X
X	
	X

KEY

W: DELIVERED POWER

(W): STARTING IMPULSE

Ω: NOMINAL LOAD

V_{pp}: PEAK/NO-LOAD PEAK VOLTAGES

CF: CREST FACTORS

M: MODULATION

D: DUTY CYCLE

ADC: CONSTANT POWER

ADC: CONSTANT VOL



DEVICE AND STANDARD ACCESSORIES

EXCELL NHP ENDOMED, without accessories

B610/A STANDARD ACCESSORIES SERIES including:

- 1 DS/E Double pedal control, electric, waterproof
- 1 NP/A Stainless steel neutral electrode, 2.5 m cable
- 1 FGE Fixing belt for electrodes
- 2 MPE/E Sterilisable electrode holder, 3.5 m cable
- 1 SEL/E Series of 8 active electrodes (2 E1 - Straight blade electrode, 2 E5 - Thick needle electrode, 1 E7 - Fine needle electrode, 1 E12 - Straight ball electrode Ø 2.5 mm, 2 E14 - Straight ball electrode Ø 4 mm)

B610/B STANDARD ACCESSORIES SERIES identical to B610/A, but with NP/GA flexible neutral conductive rubber electrode for adults

B610/P As above, with neutral paediatric electrode NP/GP



EXCELL NHP ENDOMED



B610/A



B610/B

